New Features for WHFS AWIPS Release 5.2.1
March 8, 2002

Linux Implementation

All interactive applications are now available on the Linux workstations. However, the AWIPS Message Handling System (MHS) operations are not implemented on Linux. Therefore, there is no method to issue an official product using RiverPro on Linux nor to issue a SHEF data product using the time-series tabular feature available in TimeSeries and HydroView. One can use RiverPro for everything but the critical function of issuing. The MHS limitations will be corrected in Release 5.2.2.

The non-interactive processing applications, although available for Linux, are still to be executed on the HP-UX ds1 machine. This includes the SHEF decoder, the process_dpa_files operation, and the assorted "cron" jobs.

Note that although applications on Linux can access the Informix database on the data server (ds), the Informix utility application "dbaccess" is not available on Linux. This may impact local developed scripts.

Directory Reorganization

This following information is provided FYI - it is only relevant to users who have written local applications that may interact with the WHFS directories. The directory structure under /awips/hydroapps has changed. In summary, the /awips/hydroapps/whfs/standard/bin directory was removed and all its files were installed in /awips/hydroapps/whfs/bin. Also, four locally configurable files formerly in that directory were moved from /awips/hydroapps/whfs/standard/bin to /awips/hydroapps/whfs/local/bin. These include: rpf_issue, run_report_alarm, run_roc_checker, and run_rpf_batch. The shef_issue and whfs_crontab_ds1 files that were previously in the .../local/bin directory have not been moved. Lastly, the "precip_proc" subsystem files that was formerly under /awips/hydroapps/whfs at the WFOs was moved to a directory structure at /awips/hydroapps/precip_proc.

SHEF Decoder

1. Added support for (6) new physical-element codes and (8) new type-source codes. These include the following six (6) new physical element codes:

MD, dielectric constant at depth, paired value vector
MN, soil salinity at depth, paired value vector
MV, water volume at depth, paired value vector
RN, net radiometers, scalar value
RW, total incoming solar radiation, scalar value
WD, water depth, scalar value

and the following eight (8) new type-source codes (R2, R3, R4, R5, R6, R7, R8, and R9).

2. Modified SHEF decode to treat the values for the (3) physical element codes MD, MN, MV as paired values.

HydroBase

1. In the IngestFilter window, changed the Set Switches button to Set Switches For All List Above. This is to minimize the possibility of people setting the switches globally unintentionally.

HydroView

1. Added new implementation of HydroView using alternative mapping functions to Shared Window Server (SWS).

As delivered, when selecting HydroView on the AWIPS menu, if on the HPs, the SWS-based HydroView on HP is started, if on Linux, the new HydroView (aka HydroMap) is started. To provide the capability for the new HydroView to be started on HPs also, a start_hydromap script is provided that starts HydroMap regardless of which platform it runs on. This could be configured to be used via the startup menus, if the office desires. This should only be done after consultation with the WHFS support team.

2. The interaction between the geographic window and the mouse has been modified.

a) Popup GUI with a right click of the mouse brings up set of menu options. They include zoom and panning controls and the option to have the latitude and longitude information "follow" the mouse pointer. This matches the D-2D functionality.

b) A left mouse click recenters and zooms out. A middle mouse click recenters and zooms in. This is a D-2D functionality.

c) A double mouse click selects a station point on the map.

3. The HydroView map window can be made smaller, but the maximum size is limited to the size of the map being analyzed.

4. There is now a configuration file that Hydromap reads to determine how to set up its overlays. This file is called overlay_configuration, and it is currently installed with the executable into /fs/awips/whfs/dev/HP/local/data/app/hydroview. The path and name are specified by the new token hv_config_file. The user should only make changes to this file after consultation with the WHFS support team. For its overlay displays, the application is setup to use FSL geographic files wherever possible.

5. The cities and towns overlays were modified. Now they use the FSL datasets instead of the IHFS database City table. The display of these data uses progressive disclosure. This means the more you "zoom" into the map, the more cities and towns are visible.

Hydro Time Series

1. Added station name to tabular and graphical displays.

2. Added river name to tabular and graphical displays.

3. Added SHEF PE and TS code descriptions to main time series window list, i.e. at the bottom of the window where the SHEF coded fields are already displayed as choices of data to show as a time series.

4. Added feature to search by station name, not just by station id.

5. The Beginning and Ending Time Setting fields were reversed at the top of the Time Series Control display.

6. PgUp and PgDn buttons on the graph window were fixed to behave like keyboard PgUp and PgDn keys.

7. Flood Stage / Flow data appear on the Tabular TimeSeries window only in the case when the data are defined for the particular location.

RiverPro

1. Added a new derived instruction feature to the RiverPro “PE” variables (i.e. <lid,pe,d,ts...>). The “MSL” derived instruction will convert a gage-referenced value to MSL, using the station datum elevation. It is a complement to the existing “GZ” derived instruction which converts a MSL-referenced value to gage-zero datum-referenced.

2. RiverPro 5.2.1 incorporated patch 5.1.2.2 changes to support new CRS Voice Mode.

Site Specific

1. Added patch 5.1.2.2 changes to handle load_maxfcst invocation, default forecast TS setting, and IngestFilter updating as necessary. These changes ensure that the triangular station icon in HydroView is colored properly and the RiverPro recommendations reflect the Site-Specific forecast.

Print Utility

1. Added print tokens: whfs_printcommand_HP, whfs_printcommand_LX to national file . These define the destination and any associated print options for printing from WHFS applications, for either HP or LX, respectively. The applications include HydroBase text reports, flood impact; HydroView point control table, point precip table, flood impact; and TimeSeries graph and table. FYI - the actual saving and printing of images is controlled via the scripts save_image and print_image, respectively, located in the directories /awips/hydroapps/whfs/bin. These files are baseline files which may be overwritten in future AWIPS releases.

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Addendum to New Features for WHFS AWIPS Release 5.2.1 April 23, 2002

3.0 HYDROLOGY

3.1 Hydrology on Linux

! The following RFC user applications can be run on the Linux workstation:

NWSRFS IFP, XDAT, XNAV, XSETS, Mapx, IDMA, Verify, and MPE. However, except for MPE, all these applications must be run as a user other than awipsusr due to problems in the awipsusr path.

! The following WFO user applications can be run on the Linux workstation:

HydroBase, HydroMap, TimeSeries, and RiverPro. However, because the Message Handling System (MHS) is not fully supported on Linux, neither RiverPro nor TimeSeries has the capability to transmit products outside the local system (see DRs 10094 and 10095 in Section 3). Thus, it is recommended that users continue to use RiverPro on the HP workstation. The Time Series application is fully supported on Linux, except for the "SHEF encode/issue" function available in the Tabular mode.

! For the RFC software, a given office must operate either solely on Linux or HP-UX. Operations cannot alternate between Linux and HP-UX, because the binary file operational database is unique to each operating system.

! For the WFO software, the software that uses the Informix dbaccess command must be run on the HP-UX operating system, because a dbaccess-type of Informix access is not available from Linux. Other cron jobs and software can be run on either Linux or HP.

! HydroMap is a new application running on the LX. It has similar functionality to HydroView on the HP, but it uses a new geographic viewing environment and it no longer uses the Shared Window Server (SWS) environment. The gives the user GUI a D2D-like feel. HydroMap uses D2D shape files, and has the D2D mouse button functionality.

3.3 WHFS Applications

- Incorporated assorted enhancements to the Time Series function.

- Added new SHEF physical element and type-source codes into the SHEFdecoder processing and data storage operations.

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